

Abstract

Disengagement of Impacted Fetal Head during Caesarean Section in Advanced Labour Using C-Snorkel Device versus the Conventional Method: A Randomised Control Trial

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Objectives:

To compare maternal and neonatal outcome with the use of C-snorkel device versus the conventional method for disengagement of impacted fetal head during caesarean section in advance stage of labour.

Methods:

This pilot study was a randomized control trial conducted in the labour ward and operating theatre of Pusat Perubatan UKM, between May 2013 to September 2013. The trial included 34 women whom were in advance labour during caesarean section. The C-snorkel device was used to disengage an impacted fetal head during caesarean section. Maternal outcomes evaluated were blood loss, blood transfusion, duration of surgery, incidence of extended tears and post operative infection. The fetal outcomes evaluated were APGAR score at 1 and 5 minutes, umbilical cord pH, trauma to the fetus during delivery and admission to the neonatal intensive care unit.

Results:

Patients in the C-snorkel arm had mean blood loss of 320 ± 144 cc while the conventional method had a mean of 858.82 ± 1854 cc ($p > 0.05$). Mean duration of surgery for the C-snorkel arm was 36.11 ± 8.5 minutes, while the conventional method had a mean of 63.47 ± 79 minutes ($p > 0.05$). Two patients (11.8%) in the C-snorkel arm had extended uterine tear compared to one (5.9%) in the conventional method arm. In the conventional method arm, one patient (5.9%) had an extended tear to the broad ligament resulting in post partum haemorrhage, blood transfusion and hysterectomy. The mean of 1 minute APGAR score was 8.8 ± 0.3 in the C-snorkel arm compared to 8.0 ± 1.1 in the conventional method ($p < 0.05$). At 5 minutes the mean APGAR score in the C-snorkel arm was better at 9.8 ± 0.11 compared to 9.17 ± 1.01 in the conventional method arm ($p < 0.05$). Other parameters between the two groups did not show any statistical significance.

Conclusion:

There was no significant intra and post-operative difference between both arms in terms of maternal outcomes. The neonates had better APGAR scores in the C-snorkel arm compared to conventional method. Umbilical artery cord pH and admission to the neonatal intensive care unit remained similar.